

IN WHAT STAGE DOES *MICROMUS ANGULATUS* (STEPHENS, 1836) (NEUR.: HEMEROBIIDAE) OVERWINTER?

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MICROMUS ANGULATUS IS currently a poorly understood lacewing with only a handful of post-1980 records shown in Plant (1994). These records indicate that the adult is on the wing from mid-April to mid-October with a peak from late June to late August. Aubrook (1935) described breeding the species in captivity and found the length of the life-history from oviposition to the emergence of the adult to be rather less than one month; eggs were laid in early August and the first adult emerged in early September. As Aubrook had also taken a specimen in May of the same year, Killington (1936) inferred that there had been three broods that year. What the species does in the wild between October and April appears to be unknown, although in the laboratory they have overwintered as eggs (Plant, *in litt.*), so it was with no little surprise that I determined a small brown lacewing captured on 6 December as this species.

The story of its capture is of some interest and is as follows: on 6 December 1993, Roger Hawkins collected a few discarded drink cans from a Surrey downland site with a view to recycling them. Having taken them home and placed them on one side he observed a lacewing emerge from the aperture of a can and fly towards the window. This was the specimen that I determined.

A specimen so late in the year may have been a straggler from a late third brood, the adults of which lay overwintering eggs, or alternatively may have arisen from a pupa formed inside the can whose development was accelerated by the warm and sheltered microclimate. A third alternative is that the adult itself may overwinter, as is strongly suspected in *Drepanopteryx phalaenoides* (Linnaeus, 1758). The early stages do not appear to be known in the wild in this country although in Hungary the larvae have been found feeding on root aphids on cereal crops (Plant, *in litt.*). Finding ova or pupae is thus highly unlikely and we are no nearer to a solution to the problem. The observation made here does however suggest that pitfall trapping in grassland habitats may be an effective method of capture of *M. angulatus*.

References

- Aubrook, E.W., 1935. Notes on the biology of *Micromus aphidivorus* Schrank. *North Western Naturalist* **10**: 34.
- Killington, F.J., 1936. *A monograph of the British Neuroptera* **1**: 263. Ray Society, London.
- Plant, C.W., 1994. *Provisional atlas of the lacewings and allied insects of Britain and Ireland*. Biological Records Centre, Huntingdon.